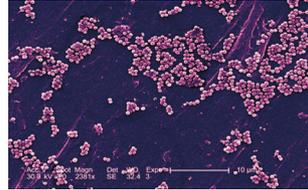
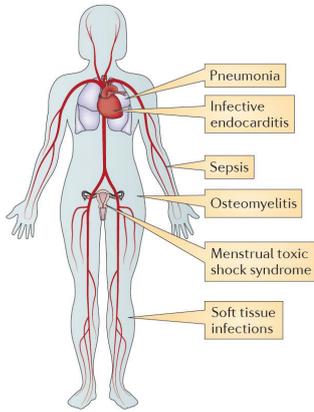


## Staphylococcus aureus

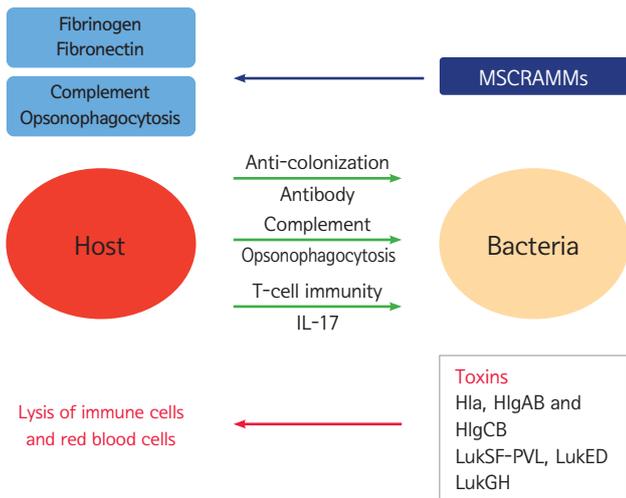
*S. aureus* causes **life-threatening diseases**, including pneumonia, infective endocarditis, toxic shock syndrome and sepsis, as well as minor diseases such as soft tissue infections.



Target Population

- Dialysis
- Chronic Diseases
- High-risk Surgery
- Diabetes
- Elderly at high-risk
- hospitalization

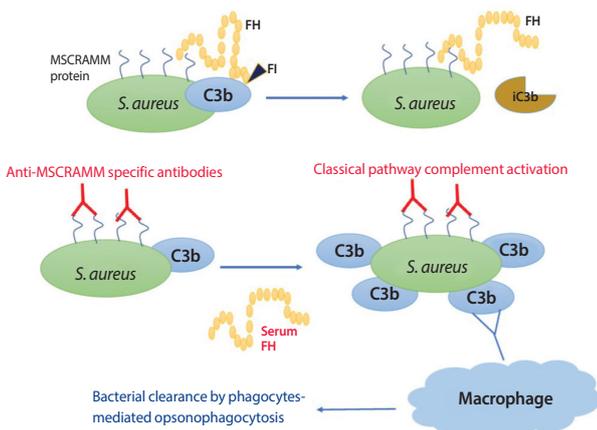
## Immune system vs. Staphylococcus aureus



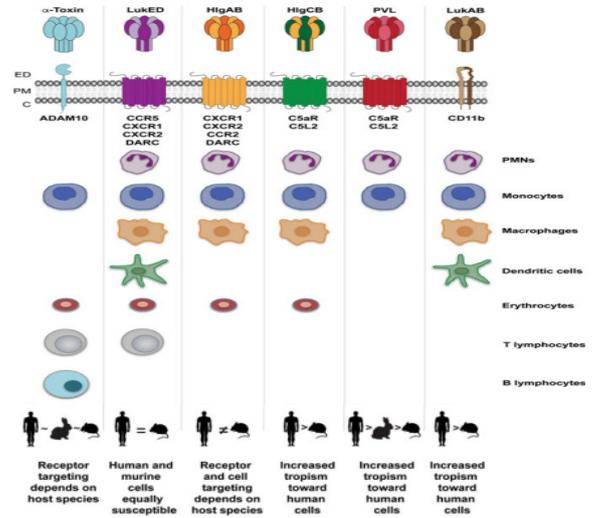
The Multivalent Subunit Vaccine

- 2 Antigens from MSCRAMMs to block the colonization & immune evasion system
- 4 Antigens from Toxins to block the lysis of immune cells

## Anti-MSCRAMM Ab-mediated MRSA Clearance

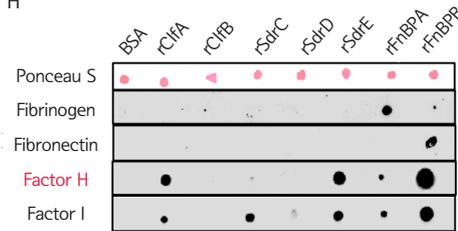


## S. aureus bi-component toxins and functions

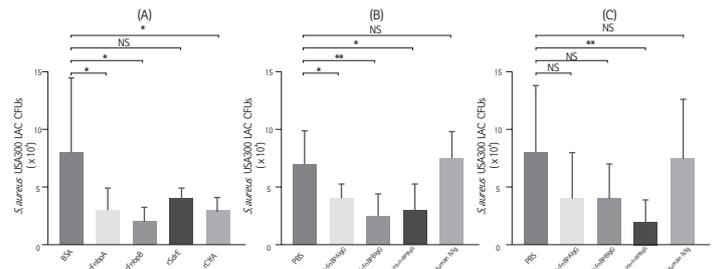


## In vitro data

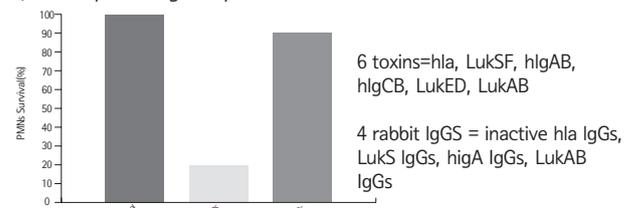
1) Three N2-N3 domains of MSCRAMM proteins recognized human factor H



2) By addition of MSCRAMMN2N3 domains (A) or by addition of rabbit or human MSCRAMMN2N3 domain recognizing IgGs decreased CFUs of *S. aureus* USA300 in the human whole blood



3) Neutrophil killing assay-whole blood



This result suggest that 4 rabbit IgGs can block Hla and 5 bi-component toxin-mediated RBC and hemolysis neutrophil lysis, respectively.

## Patent

Classify	Patent name	Number	Date
Domestic application	A novel composition for preventing or treating staphylococcus aureus infections diseases	10-2020-0114435	2020.09.08